

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MOUNT WILLIAM POND	Lake Area (ha):	13.40
Town: WEARE	Maximum depth (m):	8.2
County: Hillsborough	Mean depth (m):	4.4
River Basin: Merrimack	Volume (m ³):	592000
Latitude: 43°04'16" N	Relative depth:	2.0
Longitude: 71°43'07" W	Shore configuration:	1.46
Elevation (ft): 830	Areal water load (m/yr):	2.68
Shore length (m): 1900	Flushing rate (yr ⁻¹):	0.60
Watershed area (ha): 75.1	P retention coeff.:	0.77
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

		16 January 1995	5 July 1994
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 35%	ASTERIONELLA 65%
	#2	TABELLARIA 35%	MELOSIRA 10%
	#3	MELOSIRA 10%	COELOSPHAERIUM 10%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.18
DOM. ZOOPLANKTON (% TOTAL)	#1	LRG RND CILIATE SPP 45%	KERATELLA 19%
	#2	KERATELLA 33%	NAUPLIUS LARVA 17%
	#3	BOSMINA 10%	GASTROPUS 12%
ROTIFERS/LITER		39	202
MICROCRUSTACEA/LITER		9	131
ZOOPLANKTON ABUNDANCE (#/L)		94	376
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			3.8
BOTTOM DISSOLVED OXYGEN (mg/L)		12.2	0.4
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	4.3
Hypolimnion volume (m ³):	23500
Anoxic volume (m ³):	37000

CHEMICAL:

Lake: MOUNT WILLIAM POND
Town: WEARE

	16 January 1995		5 July 1994		
DEPTH (m)	2.0	4.0	2.0	5.0	7.0
pH (units)	6.4	6.2	6.9	6.5	6.1
A.N.C. (Alkalinity)	4.0	3.6	4.1	4.6	8.2
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.26	0.30	0.23	0.63
TOTAL PHOSPHORUS	0.017	0.022	0.008	0.010	0.020
CONDUCTIVITY (μ mhos/cm)	79.6	80.5	82.4	81.3	87.0
APPARENT COLOR (cpu)	16	17	7	16	110
MAGNESIUM			0.59		
CALCIUM			3.0		
SODIUM			10.6		
POTASSIUM			0.84		
CHLORIDE	18	18	16	16	15
SULFATE	6	6	5	5	4
TN : TP	18	12	38	23	32
CALCITE SATURATION INDEX			3.3		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

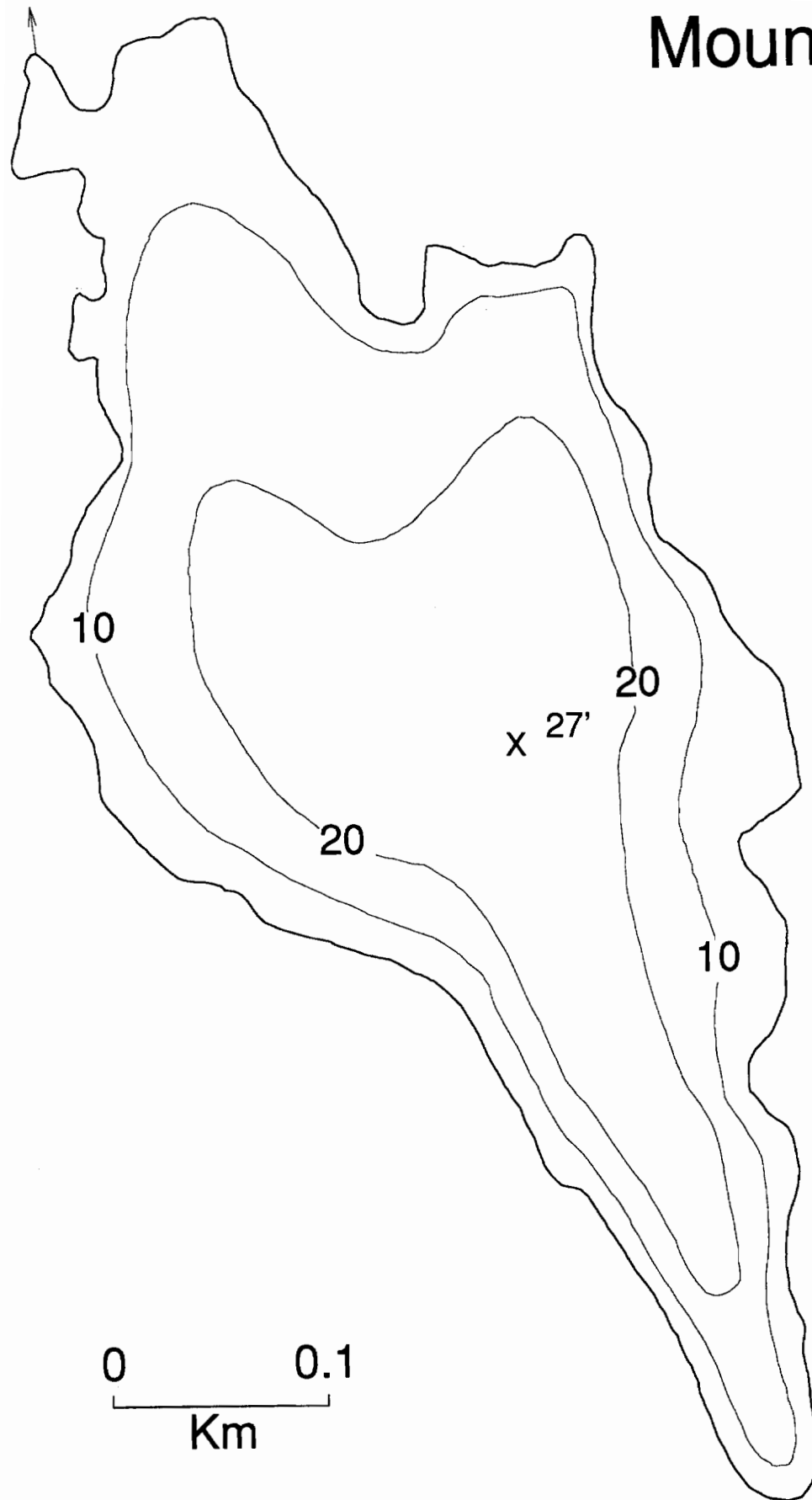
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	2	0	1	7	Meso.

COMMENTS:

1. No gas motors allowed on pond.
2. This pond was previously surveyed and classified in 1979. There was little change in water quality but the pond was rated oligotrophic in 1979. It was borderline oligotrophic/mesotrophic in both years.
3. Bottom waters were anoxic in the summer with elevated color and somewhat higher (although not excessive) phosphorus levels. Sodium and chloride values suggest some salt runoff into the pond.

Mount William Pond

Weare



10 foot depth contours

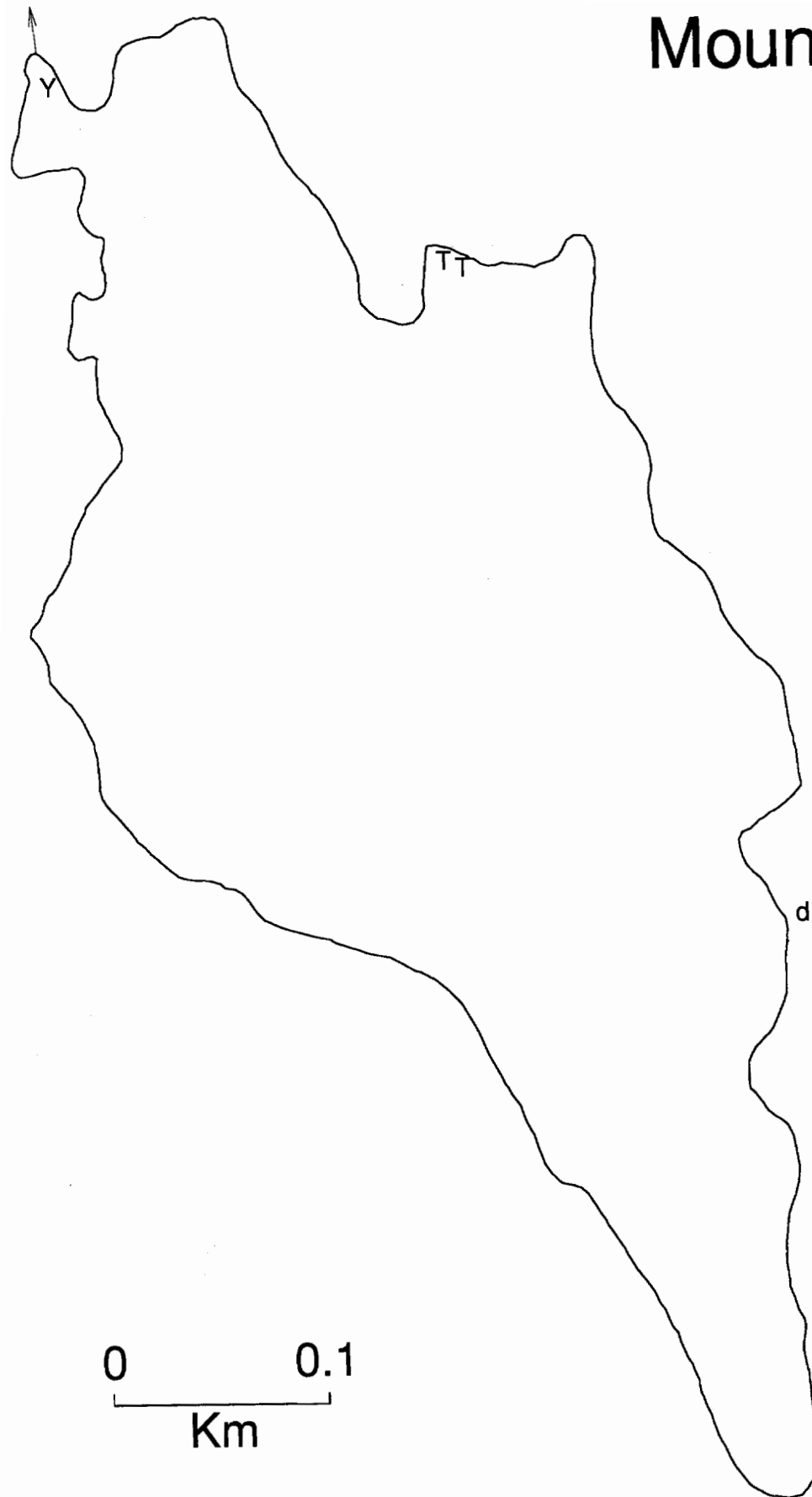
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Km

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Mount William Pond

Weare



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